

REQUEST FOR EXPRESSIONS OF INTEREST

IN THE COMMERCIALISATION RIGHTS TO

AN OPTICAL RECRYSTALLOMETER

Background

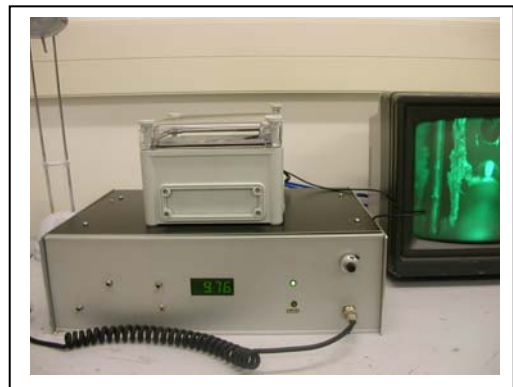
Otago Osmometers Ltd (OOL) is a highly specialised designer and manufacturer of laboratory equipment. OOL has developed and patented a unique device for the objective, quantitative measurement of recrystallization of frozen samples. OOL is looking for a suitable partner to assist in the commercialisation of this device.

The problem of recrystallization in frozen foods

Recrystallization is the process that occurs when a frozen sample approaches its melting point, and smaller frozen crystals melt and coalesce with larger adjoining crystals. Recrystallization alters the physical characteristics, texture and appearance of the frozen item.

Recrystallization is a problem in stored frozen products, especially in foods such as ice creams and frozen yoghurts. The size of unwanted ice crystals increases if the product temperature is cycled or is ever allowed to approach the melting point of the substance. Knowledge of the recrystallization qualities of a frozen item is important to ensure that:

- Storage protocols can be specified to avoid recrystallization
- New manufacturing and processing procedures do not adversely impact on the recrystallization (and hence storage requirements) of a product.



The OOL Optical Recrystallometer

The OOL device uses a patented method for measuring the amount and rate of recrystallization in a frozen sample. The method is optical and non-invasive. Samples are transitioned through a controlled temperature change and a quantified recrystallization profile is produced. The OR is currently in production and available for commercial sale.



Benefits of the OR

The OR represents the only commercially available objective method for determining quantities representing recrystallization profiles for frozen samples without the need for time-consuming splat assays.

The OR is:

Unique: The OR is the only commercially available self-contained laboratory device capable of providing recrystallization profiles

Objective: avoids image analysis (as per splat-cooling methodologies)

Fast: sample profiles obtained within 20 minutes

Easy to use: the OR obtains a recrystallization profile without the need for operator monitoring or control.

Specifications

Set-up operational requirements: running tap water and dry air. Samples are preferably pre-frozen in ethanol and dry ice.

Outputs: analogue voltages proportional to level of recrystallization and temperature of sample.

Display shows sample temperature or a value related to level of recrystallization.

Operational temperature range: -30°C to 0°C

Patent number and filing date:
PCT/NZ2003/000201

Examples of laboratory use for the OOL recrystallometer

- The evaluation of novel anti-freezes for application in ice-cream manufacture.
- The OR has been used for the preparation of recrystallization profiles for a range of frozen foods. The profiles were used to determine storage protocols for these foods in transit and display.
- The OR can be used as a QA tool to determine the consistency of manufacturing processes in maintaining target recrystallization characteristics.

Expressions of Interest

As the OR is outside of OOL's core product line, OOL is looking to license the rights to manufacture and market the technology. All current manufacturing instructions, equipment and tooling are available for potential licensees, in addition to full training and support from OOL.

Parties wanting further information, or to register their interest in licensing rights to the OR should contact OOL directly at:

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Example recrystallization profile

